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CALDERON, Albert; Fabra i Puig 299-A4, E-08031
Barcelona (ES).

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(71) Applicant: NEUROSTREAM TECHNOLOGIES INC.
[CA/CA]; 2099 Louheed Highway, Suite 301, Port Co-
quitlam, British Columbia V3B 1A8 (CA).

(72) Inventors: FASSIO, Marcelo, D., Baru; 159-15236
36th Avenue, Surrey, B.C., V3S 2B3 (CA). HOFFER,
Joaquin, A.; 241 Strong Road, Anmore, B.C., V5A
1C1 (CA). CALDERON, Enric; 215-7082 Inlet Drive,
Burnaby, B.C., V4W 2W1 (CA). JENNE, Gary, B.;
25941 - 26th Avenue, Aldergrove, B.C., V4W 2W1 (CA).

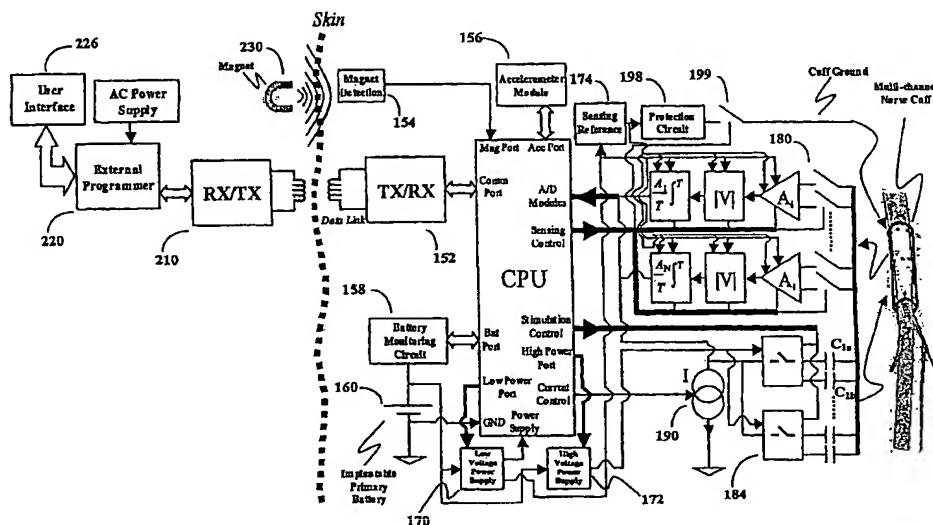
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(54) Title: IMPLANTABLE NERVE SIGNAL SENSING AND STIMULATION DEVICE FOR TREATING FOOT DROP AND OTHER NEUROLOGICAL DISORDERS



(57) Abstract: A fully implantable nerve stimulation system includes an event-triggered, closed loop control unit (50) that detects physiological events, e.g. occurrence of heel contact or toe lift event, from nerve signals through one or more nerve cuff electrodes and delivers stimulation pulses to a nerve to produce a desired physiological response. The stimulation system includes a low-noise, low-power nerve signal amplifier (180), accelerometers (156) that detect the orientation angle of a patient's thigh and a battery powered processor (150) that selectively powers components in the system to detect said physiological events and deliver said stimulation pulses with a minimum of battery power.



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